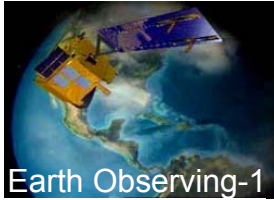


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Section 17

LAC Overall Technology Assessment

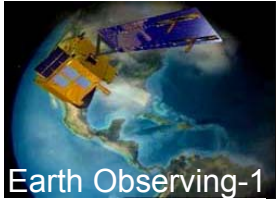


Overall Technology Assessment



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- ◆ ***Wedged Filter Imager successfully demonstrated on EO-1***
 - *Cross-track image motion < 0.5 pixel*
- ◆ ***Multi-Array/Lens Image Synthesis demonstrated***
- ◆ ***Near Room Temperature IR Array operation feasible for Moderate Resolution System***
- ◆ ***Natural Source On-Orbit Calibration System demonstrated***
 - *Array calibration similar to other systems (Slit Imagers)*

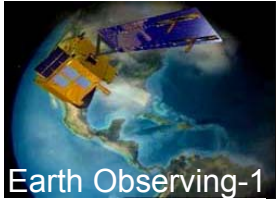


Issues for Continued Study



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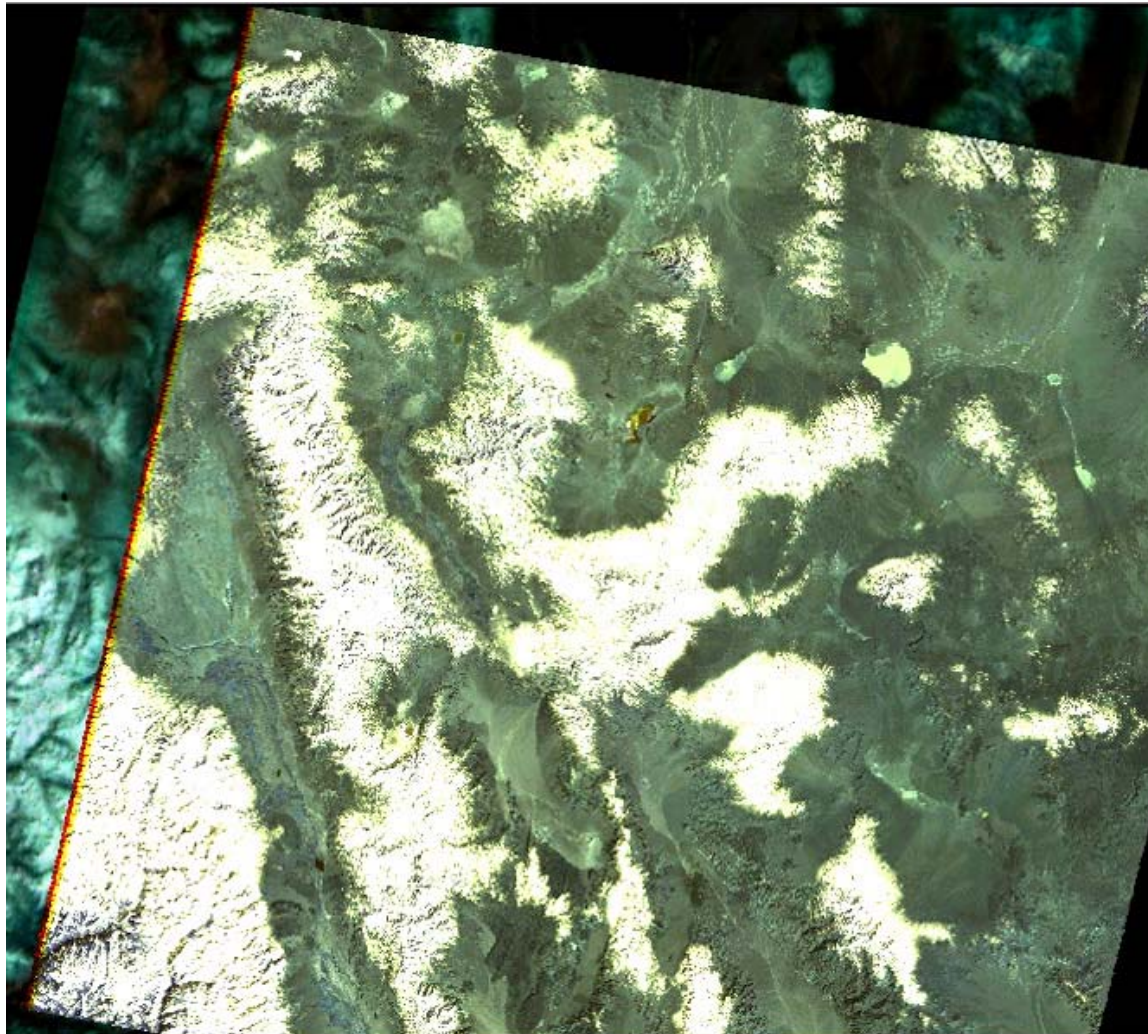
- ◆ **Source of “Fixed Pattern” Noise**
 - *Appeared after launch*
 - *Possibly related to power supply filter degradation caused by pre-launch overvoltage*
- ◆ **Cause of increase in non-responsive pixels**
 - *May be bump bond degradation*
 - *Possibly related to Pre-launch vibration test contact between filter holders and arrays*
 - *Utility of atmospheric correction*
- ◆ **Should not unduly impact utility of atmospheric correction**
 - *Science Team issue*

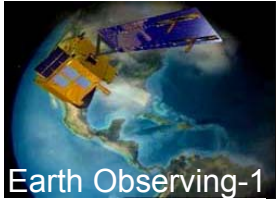


Landsat-7 Co-Registration (Cuprite)



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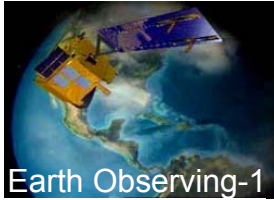


Landsat-7 Co-Registration (RR Valley)



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Next Generation Improvements



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- ◆ **Calibrated Solar Scan**
 - *Desirability Demonstrated by “Fixed Pattern” Noise Correction*
- ◆ **Ground Velocity Specified Frame Rate**
- ◆ **Visible Channels**
 - *Thinned Backside Illuminated InGaAs Arrays Capable of 0.4 μm Operation (~20% Q.E)*